

Date: Monday, August 30, 2004

Time: Noon - 1pm

Place: N144 Conference Room

Speaker: Jacqueline Keane

Title: "Ice and Carbonaceous Material in Dusty Galactic Nuclei"

Abstract:

Ultra-Luminous Infrared Galaxies (ULIRGs), which emit the bulk of their radiation in the infrared, are intense interacting mergers of two or more galaxies and account for a significant fraction of star formation in the local universe. The mid-IR spectra of a number of ULIRGs have revealed deep absorption bands indicative of ice and carbonaceous material. I will present an analysis of strongly absorbed spectra of dusty galactic nuclei. These bands serve as probes for the temperature and molecular conditions in the coldest and most shielded regions of these galaxies. The possible nature of this extragalactic material is investigated in the context of galactic star forming regions and also by comparing them with current laboratory organic refractory materials. Analysis of the absorption bands suggests substantial energetic (photons) and thermal (heat) processing of the material.

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